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The American FERTILIZER

Vol. 106

JUNE 28, 1947

No. 13

American Plant Food Council Holds Successful Convention

**Large Attendance Hears Outstanding Speakers. Discussion of Business Prospects.
Secretary of Agriculture Anderson Speaks at Banquet. Directors Elected.**

With an attendance that filled the hotel to capacity and with a program of outstanding speakers, the American Plant Food Council held its second annual convention at The Homestead, Hot Springs, Va., on June 13th, 14th and 15th. The registration showed more than 350 in attendance, from 28 states covering every principal fertilizer using section of the country.

Probably the highlight of the meeting was the address of Hon. Clinton P. Anderson, Secretary of Agriculture, who told the Convention at the annual banquet that the United States must have a national agricultural policy of "organized, sustained and realistic abundance" which will call for plant food materials to a greater extent and in perhaps different ways than ever before.

Session of Friday, June 13th

President Clifton A. Woodrum opened the Convention on June 13th with a review of the current situation in the fertilizer industry. "Agricultural research," said Mr. Woodrum, "is serving as a beacon to keep farmers and industry from the rocks of economic disaster, therefore it is important to give adequate financial support to our recognized Governmental agricultural agencies to assure uninterrupted scientific progress."

"The fertilizer industry long has been a beneficiary and strong supporter of agricultural research and education," he said. "In

fact, industry for many years has invested heavily in their own programs and cooperated financially in many others. We recognize that the prosperity of farmers and our industry is inseparable, thus we join with all agricultural producers and their organizations in support of sound research and educational programs which are essential to a self-sustaining farming program."

Speaking for the fertilizer industry, Mr. Woodrum said that "few, if any, industries can boast of a production record more than double the pre-war average, plus substantial improvements in their product, and at the same time keeping prices at a level that is relatively the lowest of any major item entering into the cost of agricultural production."

"We are still in the transition period from war to peace and are now in the heretofore rare position of having a demand for fertilizer in excess of supplies," he added. "Industry has a vast expansion program under way, but progress is being limited because of inability to procure adequate building materials, machinery and by transportation difficulties."

"Despite materials and transportation bottlenecks and barring strikes, American farmers in the fertilizer season ahead will receive more plant food than at any time in the history of the industry."

"The fertilizer industry views the future, looking toward even greater peaks of produc-

tion which will enable farmers to purchase their plant foods in the abundance that has always prevailed in all normal periods."

Dr. Firman E. Bear

The next speaker, Dr. Firman E. Bear, chairman of the Soils Department of the New Jersey Agricultural Experiment Station at New Brunswick, told the convention that the "life expectancy" of human beings "goes up with fertilizer tonnage."

Answering critics asserting that chemical fertilizers are injurious to health, the New Jersey soil scientist pointed out that (1) in 1850, before farmers began using fertilizers, the average life expectancy at birth in the United States was 40 years; (2) by 1900, "when fertilizers were being used at the rate of over 2,000,000 tons annually, our life expectancy had increased to 49½ years; (3) by 1940, with fertilizer consumption over 8,000,000 tons, life expectancy rose to 63 years and (4) in 1944, when fertilizer tonnage reached 12,000,000 tons, life expectancy increased to 66¼ years.

Dr. Bear said that "... figures show that in proportion as our fertilizer tonnage has increased so has our life expectancy," adding that "one would hesitate to claim that fertilizers are responsible for the 26 years longer lease on life we now possess than did our grandfathers a century ago, but certainly it is difficult to find a case against fertilizers on this score."

As to "why . . . we have so much trouble with degenerative diseases of the heart, brain, liver, kidney and other vital organs," despite the increase in "life expectancy," Dr. Bear pointed out "we are having more difficulty with the diseases of old age because we have more old people." He said that in 1900 a total of 4.1 per cent of the people of the United States was 65 years of age or older, 6.8 per cent in 1940 and added that "it is estimated that 14.4 per cent of our population, or nearly 24 million people, will be 65 . . . or older" by 1980.

The New Jersey scientist said that "fertilizer adds nutritive value to crops. Our primary objective is to produce high yields of high quality crops. Yields can be measured by the use of scales. Quality is often measured by the senses. Thus animals decide by taste whether or not the crop has quality. Livestock will often avoid manured grass to the point almost of starvation. But they will pick out a chemically fertilized grass plot, no matter how small, and chew it down into the soil. They need something the fer-

tilizer supplies. It has been repeatedly shown that emaciated, listless livestock can be made to flourish when their impoverished pastures are treated with chemical fertilizers, especially those that supply phosphate."

An interesting point brought out by Dr. Bear was the fallacy of the contention that chemical fertilizers destroy earthworms.

"Fertilizers feed the earthworms," Dr. Bear said, citing the findings at the New Jersey Agricultural Experiment Station to substantiate his contentions.

"On our Agricultural Experiment Station, a plot of limed land was planted to lespedeza sericea," he explained. "It received a 1,000-pound application of 0-12-12 fertilizer per acre at seeding time and 500 pounds per acre every year for the next five years. On November 6, 1946, the number of earthworms in the top six inches of soil on that plot was 1,200,000 per acre, with an additional 90,000 in the second six inches and 30,000 more in the third six inches.

"Earthworms are no more sensitive to fertilizer than are the root hairs of plants. If temporarily disturbed by an overdose, a worm can move but a root hair can't. In general, the heavier the application of fertilizer, within limits, the greater the growth of crops and the larger the amount of crop residues that are left behind in the soil. These provide the food for earthworms."

Representative Harold D. Cooley

Representative Harold D. Cooley of North Carolina, member of the House Agriculture Committee, in the closing address of the Friday meeting, pointed to agricultural research and marketing as "America's problem No. 1 for the reason it is broad enough to involve world trade upon the revival of which depends not only the prosperity of farmers but actually the prosperity of all the people of the Nation."

"Our great crops of wheat, cotton and tobacco constitute the surplus crops which if not profitably marketed would bring American agriculture to grief and along with it an unbalanced economy which will of necessity ruin the whole economy of our Nation," Mr. Cooley said. "If the producers of our normally surplus crops—wheat, cotton and tobacco—are in distress, then the rest of the Nation cannot be prosperous. Therefore, the entire Nation has an interest in the proper solutions of the problems of the producers of these commodities."

"We must give deserved recognition and adequate financial support to the problem of marketing if we are to safeguard the mil-

lions of dollars already invested in agricultural production," Mr. Cooley emphasized.

"The field of agricultural research and marketing has been sadly neglected. We have spent hundreds of millions teaching farmers how to produce and we have spent other hundreds of millions teaching them how to control production, but we have spent only a nominal sum teaching them the arts of distribution and marketing."

Again turning to world trade which he described as "a two-way road," Mr. Cooley said that "world trade must be revived and revitalized, and the wheels of world commerce must start turning at not some distant date but immediately."

"If we return to economic isolation and to cut-throat competition, we will drive this nation into an economic panic which the institutions of America cannot possibly survive," he added, emphasizing that "only by world cooperation can the economy of America survive."

"We will not have a depression in America," he asserted. "America cannot survive another depression. With our debt burden in the sum in excess of 250 billion dollars, we must maintain a national income at or about its present level and our national income cannot be maintained at its present level with declining commodity prices and wage levels. Prosperous agriculture is essential to the Nation's prosperity and well-being."

Mr. Cooley said there "is unlimited world demand for fertilizer and fertilizer materials."

"While I am anxious for every possible effort to be made to meet these fertilizer demands, I am frankly of the opinion that the fertilizer industry has done a splendid job and if given the opportunity will make further strides in meeting both domestic and foreign demands," he said. "I feel that the fertilizer industry should be given every opportunity to expand facilities and increase production and that only as a last resort should the government invade this field."

Session of Saturday, June 14th

The breakfast forum on Saturday morning, which was inaugurated at last year's convention with such excellent results, was well attended. Editors of four of the Nation's leading farm magazines, viewing a long-range pattern for American agriculture, emphasized the importance of fertilizer, mechanization and maintenance of soil fertility in achieving a program of "balanced abundance" in agriculture.

The editors participating were: Dr. Paul D. Sanders, editor of the *Southern Planter*, Richmond, Va.; Robert H. Reed, editor of the *Country Gentleman*, Philadelphia; Ray Yarnell, editor of *Capper's Farmer*, Topeka, Kans., and W. C. Lassetter, editor of *The Progressive Farmer*, Memphis, Tenn.

Dr. Sanders said that "... the mechanization and modernization of rural America is a backlog of business big enough to keep the economic machine running full blast for years to come," but added that "this grass-roots prosperity will continue only so long as consumers are willing to give farmers a fair price for foods and fiber."

"We demonstrated beyond a shadow of doubt during the war that plant food properly applied can increase enormously the farmer's ability to produce food and fiber and in so doing reduce sharply his cost of production," he said. "By doubling fertilizer consumption, farmers hard hit by labor shortages, made two blades of grass grow where one grew before and made America the best fed and best clothed nation in the world. I am proud, on behalf of the farm press, to pay this small tribute to the plant food industry. It is an even greater tribute to the free enterprise system . . . and I am emphatically and unalterably opposed to public policy that in any way would jeopardize the private control of the fertilizer industry which has just written one of the most heroic chapters in the entire war period."

Mr. Yarnell said, "A program of balanced abundance on our farms is needed by farmers and by consumers if agriculture and the Nation is to thrive and be strong," adding that "scarcity has no place in the American way of living."

He emphasized that "balanced production on farms does not mean excessive production" or "exploiting the land," but takes into consideration restoration of wornout soil, putting back fertility removed by crops and "quality as well as quantity production."

Mr. Lassetter said that "through proper mechanization, a better use of fertilizers, the incorporation of livestock production along with more productive pastures and a better use of row crops, the farmers of the mid-South hope to defend themselves against the lower prices for their products which they expect."

"The feeling in the mid-South is that mechanization, applied in a practical way, will contribute greatly to a profitable agriculture in the future," he said, emphasizing that "mechanization is not confined to the large

(Continued on page 26)

A Policy of Abundance*

By HON. CLINTON P. ANDERSON
U.S. Secretary of Agriculture

I WANT to talk to you this evening about two extremes, hunger and plenty, and about the importance of plant food materials in overcoming hunger and fostering abundance.

Recently in testimony before the House Agriculture Committee I reported my firm belief, backed up by facts and figures, that the one practical policy for American agriculture is that of organized, sustained, and realistic abundance.

If we are to put such a policy into effect, we will have to use plant food materials to a greater extent and in perhaps different ways than ever before. This may be an even greater challenge to the fertilizer industry than was the war and its aftermath—if a greater challenge is possible.

But before we can really begin to work out our long-range program of plenty, we must meet the other extreme, which confronts us at this moment—the problem of hunger—the world shortage of food. Plant food materials have a dramatic part in the epic tragedy now being enacted on the world stage. Plant food materials are so vital to the people of all countries at this moment that they are being allocated on an international basis just as the life-saving cereals are divided up by mutual consent. The great food requirement is grain, and the great plant food requirement is nitrogen. You have no idea how difficult it is for the International Emergency Food Council to allocate the short supplies of nitrogen. The world outlook for phosphate has improved so that the shortage now does not appear to be serious, and there may be about enough potash to go around.

The shortage of nitrogen underscores the fact that the world cannot yet see the end of the food emergency. According to the IEFEC, the world lacks more than a million tons of having enough cereals to maintain current rations throughout the world until the new harvests come in. Even with a record wheat crop in the United States, we can see little hope for any material increase in food supplies in 1947-48. Export supplies of fats and oils are only 60 per cent of prewar. Export supplies of rice are less than 30 per cent of

prewar. Sugar production is picking up but still below prewar. Europe has 40 per cent less meat than prewar. Supplies of other foods are down also. And population, in spite of the war, is up.

It was with this situation in mind that I recently recommended that the IEFEC call a meeting of the head food and agriculture officials of all countries to try to work out improvements in the conservation and distribution of food supplies in the needy countries.

It is with the same background in mind that I call on the manufacturers and distributors of plant food materials to dig in for a long fight against shortage and world hunger. American farmers have been doing a grand job of helping to prevent starvation. In this crop year they are supplying grain exports that probably will total about 550 million bushels with a shipside value of about one and a third billion dollars. That's not only a great deal of food but a lot of plant food too, and you men have helped to supply it. You have also helped make plant food available to other countries so that they could rehabilitate their own agriculture. We have reason for pride but not for complacency.

The Domestic Situation

Now let us jump from the immediate world emergency to consideration of long-term problems of American agriculture. It may seem at first that this is a big jump in our thinking. But don't be too sure. Before the extreme world demands on our production ease off, we must have our future courses planned. Potato surpluses for several years have given us a foretaste of bitter conditions that could become general if we are unprepared to deal with them. Also, we have been and still are placing greater demands on our soil resources than we can afford to continue indefinitely. Now is the time to decide—not merely, on the negative side, how to protect ourselves against postwar problems that may arise, but also, more positively, to set objectives and plans that we really want. The future use of plant food materials will be affected by the decisions we make. At the same time, our knowledge of, and supplies of, plant food materials will undoubtedly affect our decisions.

* A summary of remarks at the Annual Banquet of the American Plant Food Council, Hot Springs, Va., June 14, 1947.

One point that seems fairly certain is that in the future we are going to use plant food materials for conservation and improvement of the soil to a greater extent than in the past. This may not mean we will use any less for the old purposes, production of cash crops, but I predict farmers in the future will plan their use of fertilizer much more carefully. They will use it to develop safer and more profitable systems of farming. They will use it much more precisely to meet the needs of particular fields and farms, to widen the range of crops they can grow and thus to increase the opportunity for diversifying their operations; in short, they will use it to improve total farm management. In saying this, I am assuming that we will be able to go ahead with the research work and demonstrations and other educational work that will make such a trend possible. As you know, I am on record as favoring the establishment of a national fertilizer policy that will fit in with the sound long-term objectives of our agriculture. Our fertilizer policy should aim toward widespread adoption of better farming systems, development by private industry (including cooperatives) of adequate production and distribution facilities to supply farmers the plant food materials they want at fair prices, and the exploration, utilization and conservation of fertilizer mineral deposits. Increased research and education will help us achieve those ends.

Support for a National Policy

I think it is highly significant that you people in the plant food business are devoting a great deal of thought to national agricultural policy. You have a feeling for the importance of your business that extends beyond the dollar sign. I know you take sincere pride in the fact that your product and your effort help to safeguard the nation's food supply and will help to develop a permanent and profitable American agriculture. It is significant, too, that you devote some of your effort toward giving other people this concept. I wish many more people would think along this line. For those who stop to think, it's the simplest thing in the world to understand that we all have a personal interest in the soil and in the conduct of agriculture.

Once this personal interest is realized, we have little difficulty getting together on long-range policy—the direction we want to go. Programs to implement policy are another matter. How we go about reaching our objectives on general economic conditions in the nation and the world, on changing demands,

on soil and climatic conditions. But it is important to set a course.

Fertilizer and Livestock

We have many striking examples of how plant food materials contribute to the success of livestock production.

Our people at Beltsville recently told me about an experiment in Maine. Use of lime and fertilizer tripled the production of forage and of milk, as compared with no soil treatment. One type of treatment not only increased quantity but produced a forage nearly three times as rich in phosphorus and almost twice as rich in protein and calcium as that from the untreated plot. From many experiments we know that fertilizers and lime make a tremendous contribution to the improved nutrition of livestock and the production of such protective foods as milk and meat.

I know you are familiar with the North Carolina corn experiments in which yield of hybrid corn was increased more than 70 bushels an acre by increasing the application of commercial fertilizer nitrogen. You also know about the work being done to increase corn yields through proper timing of fertilizer applications. This is a highly interesting field of study, indicating that we have not begun to reach the limits of increasing corn yields through the use of plant food materials. Already farmers are using two to three times as much fertilizer on corn as they did before the war, and it is estimated that fertilizer increased the 1946 crop by 100 million bushels.

These corn yield increases are important in themselves, but perhaps the greater significance is that they may enable farmers to use rotations that are better for the soil.

There is virtually no end to the factual evidence that wise land use and abundance of the products our people want go hand in hand.

We have no practical alternative to a national policy of organized, sustained, and realistic abundance. You people in the plant food business, like the farmer, have an opportunity to serve the national welfare as well as your own interests in helping to establish such a policy and to develop the programs to make the policy effective.

It is much easier to talk about these things than to do them. No country has ever followed such a policy as I have outlined. No country has ever had such an opportunity as we have now. Perhaps no country will ever have the opportunity if we do not lead the way while we have the chance:

(Continued on page 26)

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Convention Golf Tournament

In spite of the uncooperative attitude of
the weatherman, the Annual Golf Tourna-
ment of the American Plant Food Council
Convention was well attended and some in-
teresting competition ensued.

The Golf Committee, consisting of Albert
B. Baker, Sr., *Chairman*; Albert B. Baker,
Jr., C. F. Burroughs, Jr., W. L. Waring, Jr.,
and C. E. Lightfoot, had prepared a well-
rounded schedule of events. When the last
foursome had splashed their way to the nine-
teenth hole, the following winners were
announced:

JUNE 13TH

Medal Handicap—Walter Reus, *winner*; A.
L. Walker, Jr., *runner-up*; J. D. Stewart,
third

Low Gross—W. T. Steele, Jr., *winner*; Watts
Gunn, *runner-up*; J. A. Rice, *third*

Kickers' Handicap—L. J. Mitchell, *winner*; L.
R. Boynton, *runner-up*

Match Play vs. Par—M. W. Darden, *winner*;
A. B. Baker, Jr., *runner-up*

JUNE 14TH

Medal Handicap—A. H. Carpenter, *winner*;
M. E. Hunter, *runner-up*; C. T. Harding,
third

Low Gross—F. J. Woods, *winner*; H. R. Wim-
ple, *runner-up*; B. A. Crady, *third*

Kickers' Handicap—R. C. Ellis, *winner*; Harry
Kemp, *runner-up*

Match Play vs. Par—J. F. Doetsch, *winner*;
C. G. Crockett, *runner-up*

JUNE 13TH AND 14TH

Two-Day Ringer Handicap—Watts Gunn,
winner; W. T. Steele, Jr., *runner-up*; J. E.
Barnes, *third*

Ladies' Putting Contest:

For Golfers—Mrs. J. W. Ground, *winner*;
Mrs. G. W. Gage, *runner-up*

For Non-Golfers—Mrs. T. E. Bradley, *win-
ner*; Mrs. L. Dudley George, *runner-up*

Handsome prizes for the successful con-
testants were donated by the American Cyan-
amid Company, Bonneville, Ltd., Chilean
Nitrate Sales Corporation, Liberty Limestone
Products Corporation, Pacific Coast Borax
Company, Potash Company of America,
Union Special Machine Company, United
States Potash Company, and American Plant
Food Council.

Tribute to Ralph B. Douglass

At the annual Convention of the American Plant Food Council, the term of Ralph B. Douglass, of Smith-Douglass Co., Norfolk, Va., as chairman of the Council's Executive Committee expired. In recognition of the outstanding service he had rendered during his term of office, the following statement was prepared by T. E. Milliman, Cooperative G. L. F. Farm Products, Inc., and read at the general session on June 14th, when it was ordered entered in the minutes:

On Ralph B. Douglass, Retiring Chairman of the Executive Committee, American Plant Food Council

This is a testimonial to a man who has always been on the stock corporation side of the business fence, from a man whose business experience has been gained in farmers' cooperatives. These two forms of private business are considered by many to be natural enemies.

When this nation began to gird itself for war, the demands for munitions almost at once adversely affected the supplies of chemicals needed by farmers for the production of crops. The requisitions of chemicals for war-making by one branch of the Government bore no relation to the exhortations and incentives of another branch for the production of more and more vitally needed food. The fertilizer industry became a mere instrumentality as the various departments and bureaus of the Government took over.

Even before Pearl Harbor, Ralph B. Douglass had volunteered to place himself at the service of those in the Government who were concerned that farmers be supplied with mineral plant foods to the full limit permitted by the national peril. When much frantic interdepartmental activity and competition ensued, Mr. Douglass was soon called upon.

During the whole of the war period, he served on committee after committee and sometimes worked alone to aid in the proper balancing of the distribution of chemicals as between war use and food production. Occasions arose when his advice and influence might have been used to favor the regions in which his company operated. No greater adherence to the needs of the nation and to the equities which a nationwide industry deserved could be expected or found among those who served in that period of the nation's extremity.

During the whole war period of almost constant service by Mr. Douglass the sub-

ject of fertilizer prices was one in which he did not indulge. His concern lay with making the greatest possible use of all of the fertilizer materials which might be spared from the prosecution of the war.

The world conflict being ended, it was the opinion of Mr. Douglass and others that the fertilizer industry deserved a better standing in the eyes of the nation for its long-time services in supplying plant foods to farmers when, where and how wanted and at prices yielding comparatively modest returns. Under difficult conditions, with admirable restraint and a full sense of public relations, Mr. Douglass labored long and constructively to launch the American Plant Food Council. For two years, he has contributed fine judgment, much quiet energy, and heartening inspiration to the development of the only trade organization of its kind, whose main purposes are in the interests of farmers and the nation, and secondarily of the industry. The Council has had the contributions in a pivotal position of a first-class mind, whose effort has been to promote a better understanding by the people of the purposes and problems of the industry.

Potash Deliveries Break Record

A total of 518,755 tons of potash salts containing an equivalent of 276,685 tons of K_2O was delivered during the first quarter of 1947 by the five major American Producers. This is the largest amount ever delivered during any quarter, the American Potash Institute announces. It represents an increase of 12 per cent in salts and 7 per cent in K_2O over the corresponding period in 1946, due in part to the fact that in January for the first time the American Potash producers delivered more than 100,000 tons K_2O in a single month. Deliveries for agricultural purposes in the United States, Canada, Cuba, Puerto Rico, and Hawaii consisted of 480,133 tons of potash salts equivalent to 252,736 tons of K_2O compared to 238,378 tons K_2O in the first three months of 1946. Muriate of potash predominated with 222,267 tons K_2O , whereas 17,619 tons were delivered as sulphate of potash and sulphate of potash magnesia, and 12,850 tons as manure salts. Deliveries for chemical purposes totaled 30,255 tons of salts equivalent to 18,886 tons K_2O , an increase of 16 per cent over the corresponding period a year earlier. Exports to other than Institute countries amounted to 8,366 tons of potash salts containing 5,063 tons K_2O , about the same as 1946.

Registry of Attendance

Second Annual Meeting of The American Plant Food Council, Inc.
The Homestead, Hot Springs, Va., June 13-15, 1947

THE AMERICAN PLANT FOOD COUNCIL

Washington, D. C.
Clifton A. Woodum, *President*
Cédric G. Gran, *Assistant to the President*
John R. Taylor, Jr., *Agronomist*
Louis H. Wilson, *Director of Information*
Mrs. Diane Taylor, *Office Manager*
Miss Gloria Ohliger

Abbit, Mrs. Elizabeth, Smith-Douglass Co., Inc., Norfolk, Va.
Ackerly, Robert N., Morgan Bros. (Bag Co.), Richmond, Va.
Adams, C. C.
Albright, H. M., U. S. Potash Co., New York City
Anderson, Hon. Clinton P., U. S. Department of Agriculture, Washington, D. C.
Anderson, Mrs. Clinton P.
Anderson, Nancy
Anderson, Sherbourne
Anderson, S. W., Contentnea Guano Co., Wilson, N. C.
Anderson, Mrs. S. W.
Andrews, W. R. E., Booklyne Chemical Works, Inc., Baltimore, Md.
Appleton, W. H., Potash Co. of America, New York City
Arledge, C. C., Armour Fertilizer Works, Atlanta, Ga.
Ashcraft, Lee, Ashcraft-Wilkinson Co., Atlanta, Ga.
Ashcraft, Robert E., Ashcraft-Wilkinson Co., Norfolk, Va.
Ashcraft, Mrs. Robert E.
Athey, Thomas B., Jaite Co., Jaite, Ohio
Austin, Guy D., Guy D. Austin & Co., Miami, Fla.
Austin, Mrs. Guy D.
Ausley, P. C., Potash Co. of America, New York City
Babcock, Oliver M., Hoover & Mason Phosphate Co., Chicago, Ill.
Babcock, Mrs. Oliver M.
Baker, A. B., Sr., Bradley & Baker, New York City
Baker, Mrs. A. B., Sr.
Baker, A. B., Jr., Bradley & Baker, New York City
Bailey, M. V., American Cyanamid Co., New York City
Ballard, G. F., American Cyanamid Co., New York City
Barnes, J. E., U. S. Potash Co., New York City
Barnes, Mrs. J. E.
Barrett, W. E., Richmond Guano Co., Richmond, Va.
Batchelder, Stewart P., L. I. Produce Co., Inc., Riverhead, N. Y.
Beane, W. S. R., Acme Fertilizer Co., Wilmington, N. C.

Becker, John A., Armour Fertilizer Works, Atlanta, Ga.
Bennett, J. C., American Cyanamid Co., New York City
Benton, J. E., Raymond Pulverizer Division of Combustion Engineering Co., Chicago, Ill.
Bear, Dr. F. E., N. J. Experiment Station, New Brunswick, N. J.
Blass, John M., Naco Fertilizer Co., Wilmington, N. C.
Bolton, H. H.
Boynton, L. R., U. S. Potash Co., New York City
Bradley, T. E., Potash Co. of America, Peoria, Ill.
Bradley, Mrs. T. E.
Brent, Allen D., Southern Fertilizer and Chemical Co., Savannah, Ga.
Brewster, William, Baugh & Sons Co., Baltimore, Md.
Brewster, Mrs. William
Brewster, B. H., III, Baugh & Sons Co., Baltimore, Md.
Brewster, Mrs. B. H., III
Brown, C. T., Federal Chemical Co., Louisville, Ky.
Brown, Mrs. C. T.
Briggs, George C., Armour Fertilizer Works, Atlanta, Ga.
Bryan, Fred P., Chilean Nitrate Sales Corp., New York City
Burroughs, C. F., Jr., F. S. Royster Guano Co., Norfolk, Va.
Burroughs, Mrs. C. F., Jr.
Caldwell, Harry B., Greensboro, N. C.
Caldwell, Mrs. Harry B.
Camp, R. F., Chilean Nitrate Sales Corp., New York City
Camp, T. E., Jr., Armour Fertilizer Works, Atlanta, Ga.
Campbell, W. M., Cooperative Fertilizer Service, Inc., Richmond, Va.
Campbell, L. P., Acme Fertilizer Co., Wilmington, N. C.
Carlin, William G., "Star Farmer of America," Coatesville, Pa.
Carpenter, A. H., Baugh & Sons Co., Baltimore, Md.
Chapman, W. L.
Champion, J. V., Smith-Douglass Co., Norfolk, Va.
Clarke, A. G., International Paper Products Division, Baltimore, Md.
Cloaninger, B. D., Clemson A. & M. College, Clemson, S. C.
Cocks, Robert, Farmers Cooperative Fertilizer Purchasers, Inc., Kenbridge, Va.
Coffee, Fred F., Armour Fertilizer Works, Jacksonville, Fla.

(Continued on page 32)

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FERTILIZER MATERIALS MARKET

NEW YORK

Interest Centers in New Contracts for 1947-1948. Demand Exceeds Estimated Supply in Most Materials. Some Products Unwilling to Accept Advance Commitments. Short Supply on All Materials Continues.

Exclusive Correspondence to "The American Fertilizer"

NEW YORK, June 23, 1947

The interest of the fertilizer industry is now centered on lining up supplies of materials for the 1947-48 season. The potash companies, who have announced prices for the coming year, are getting plenty of business—in fact, their problem seems to be to portion out their productive capacity so that all customers may get a fair share. As most buyers have increased their requests over last year's allotment, potash executives are developing a high order of diplomatic skill.

Producers of other materials have, in many cases, been reluctant to make long-time commitments. Price advances have been made in some materials for July shipment and other increases are expected.

Sulphate of Ammonia

Production of sulphate of ammonia continues at high levels but no stocks are accumulating as buyers are taking the entire output on existent contracts. One supplier is taking orders for July at \$33.00 to \$35.00 per ton, f.o.b. ovens.

Nitrate of Soda

The nitrate of soda situation continues extremely tight and many farmers will not be able to get anywhere near their usual supply for top dressing. Imports from Chile are expected to continue during July.

Ammonium Nitrate and Solutions

Production of ammonium nitrate is running at about 85,000 tons a month but the demand is still greater than the supply. Nitrogen solutions are also short of demand. The price for the July-September quarter is around \$107. per ton of nitrogen, f.o.b. works and contracts are being accepted for regular monthly deliveries.

Organic Materials

Fertilizer mixers are showing little interest in organics as it is impossible to compete with feed manufacturers even at the lower prices now prevailing. Offerings of blood, tankage, etc., have been made at around \$6.50 per unit of ammonia (\$7.90 per unit N) but the feed trade is showing little interest.

Superphosphate

Production figures show a marked increase over previous years, as new plants come into production. Producers are reluctant to take long time contracts or to announce prices for the coming fertilizer year. Operating costs have increased and it seems certain that contract prices, when issued, will be no less than present spot quotations.

Phosphate Rock

The tight situation, which has existed for the past few years, continues without abatement. As new production facilities come into operation, the demand takes up the increased supply and no reserve stocks are accumulating at the mines. Reports from abroad show that production in North Africa is increasing steadily and should reach prewar volume or higher by the end of the year.

Potash

Producers are still booking contracts for next year's requirements. In many cases, buyers want increases in their monthly allotments and it is difficult for the potash companies to keep their total commitments within their expected production, which will show, at best, only a slight increase over the current year. Nothing definite can be determined at present as to what foreign potash will be available for import during the coming year.

CHARLESTON

Mixed Goods in Demand for Top Dressing. Organics Still Above Fertilizer Price Levels. Chemicals in Short Supply.

Exclusive Correspondence to "The American Fertilizer"

CHARLESTON, June 20, 1947.

Demand remains fairly strong in some sections for mixed fertilizers as farmers lack sufficient nitrate of soda for top dressing. Superphosphate demand in the midwest remains active. All basic materials continue insufficient in supply to meet the call for nearby or future shipment.

Organics.—Fertilizer manufacturers are beginning to evidence interest in organics for the new season but are unwilling to pay the high prices prevailing last season. However, the organic picture is not bright and supplies may be tight and high priced again for the new season. European material is not expected to be offered for an indefinite time. South American organics continue above domestic price levels. Domestic nitrogenous is expected to be insufficient to meet the demand for the new season. Prices on this material range from \$4.50 to \$5.50 per unit of ammonia \$5.47 to \$6.68 per unit N), f. o. b. production point in bulk, depending on the producer.

Castor Pomace.—It is reported that this material may be in short supply this coming season as the producers are having difficulty disposing of castor oil and crushing of castor beans may, therefore, be curtailed. Present movement is against current contracts with a few outside sales at around \$37.50 per ton, f. o. b. works.

Blood.—Interest is mainly from the feed trade. Market is steady at around \$7.25 per unit of ammonia (\$8.81 per unit N) f. o. b. Chicago.

Fertilizer Tankage.—Feed interest sustains the market at around \$7.00 to \$7.25 per unit

of ammonia (\$8.51 to \$8.81 per unit N) f. o. b. Chicago.

Nitrate of Soda.—Demand remains strong mainly because of shortage that has been long existent. Domestic production is still curtailed because of scarcity of basic materials. Importations are insufficient to meet demand. Prices are firm and unchanged.

Potash.—Inquiry for spot and future potash remains exceedingly active, but miners do not expect to be able to increase production sufficiently to meet the estimated demand. No estimates can be made at this time as to the amount of French potash that will be imported for the new season.

Superphosphate.—Supplies are still tight and demand strong in spite of proposed curtailment of the Government AAA program. Spot material is tight and offerings of future material scarce.

Phosphate Rock.—Market remains tight with miners unable to accumulate any stocks due to heavy demand. Prices are firm and unchanged.

PHILADELPHIA

Demand for Most Materials Still Greater Than Probable Supply. Little Interest in Organics. Higher Prices on Some Materials Expected.

Exclusive Correspondence to "The American Fertilizer"

PHILADELPHIA, June 20, 1947.

Most fertilizer materials are still in tight supply and active interest continues in future deliveries. In most instances the demand is for greater quantities than contracts of the previous year. It is conceded that prices must be higher. It is reported that the price of crude sulphur is about to be advanced \$2.00 per ton, which is said to be the first price change in this article since 1938.

Sulphate of Ammonia.—Prompt supply



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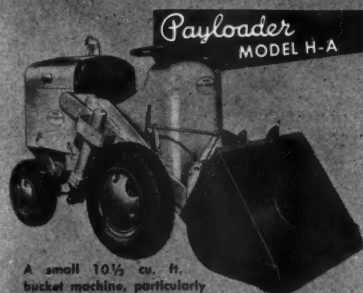
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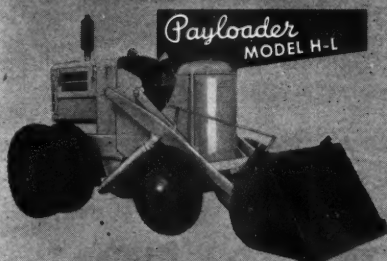
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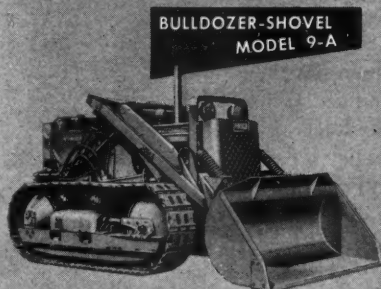
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remains tight, with deliveries reported behind schedule. Higher prices are expected for the new year, and one producer has already indicated \$33.00 to \$35.00 per ton, f. o. b. producing plants, all freight charges for buyer's account.

Nitrate of Soda.—There is practically no change in the market. Demand continues ahead of the supply, and top-dressing needs are still very acute.

Castor Pomace.—There is active inquiry for this material but no offerings in the market.

Blood, Tankage, Bone.—At present the fertilizer mixers seem to have lost all interest in organics; nor are the feeders anxious buyers. Most quotations are nominal, and the limited selling taking place is at prices under previous levels.

Fish Scrap.—Offerings have been rather free during the present week at prices ranging from \$125.00 to \$145.00 per ton for meal, with scrap about ten dollars per ton lower. Some acid fish that appeared on the market failed to excite much interest.

Phosphate Rock.—Demand continues quite active, and there is ready outlet for the material directly from production. It is expected, however, that increased mining and handling facilities are not far off.

Superphosphate.—Production is not now sufficient to supply requirements, and it is expected that the demand will continue ahead of supply for some months. Increased raw material and manufacturing costs presage higher prices on new contracts.

Potash.—Contracts for the new fertilizer year are being generally entered into throughout the trade, with buyers hoping for increased tonnage over last season. Present demand is said to exceed producing capacity.

CHICAGO

No Increase in Organics Supply. Feed Materials Market Quiet with No Change of Prices.

Exclusive Correspondence to "The American Fertilizer"

CHICAGO, June 21, 1947.

Production of organics has, as far as can be observed, not increased, while inquiry is fairly active. If this situation continues, it will naturally have a bullish effect on the future market.

Both wet rendered tankage and blood are easy and the market rather quiet. Asking prices since the last advices have remained practically the same.

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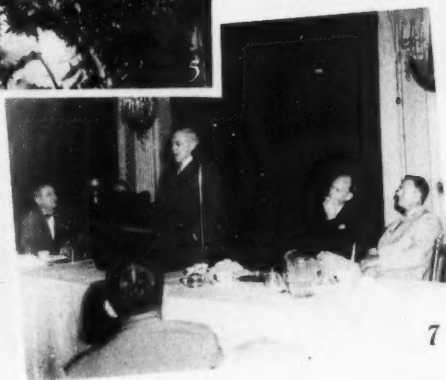
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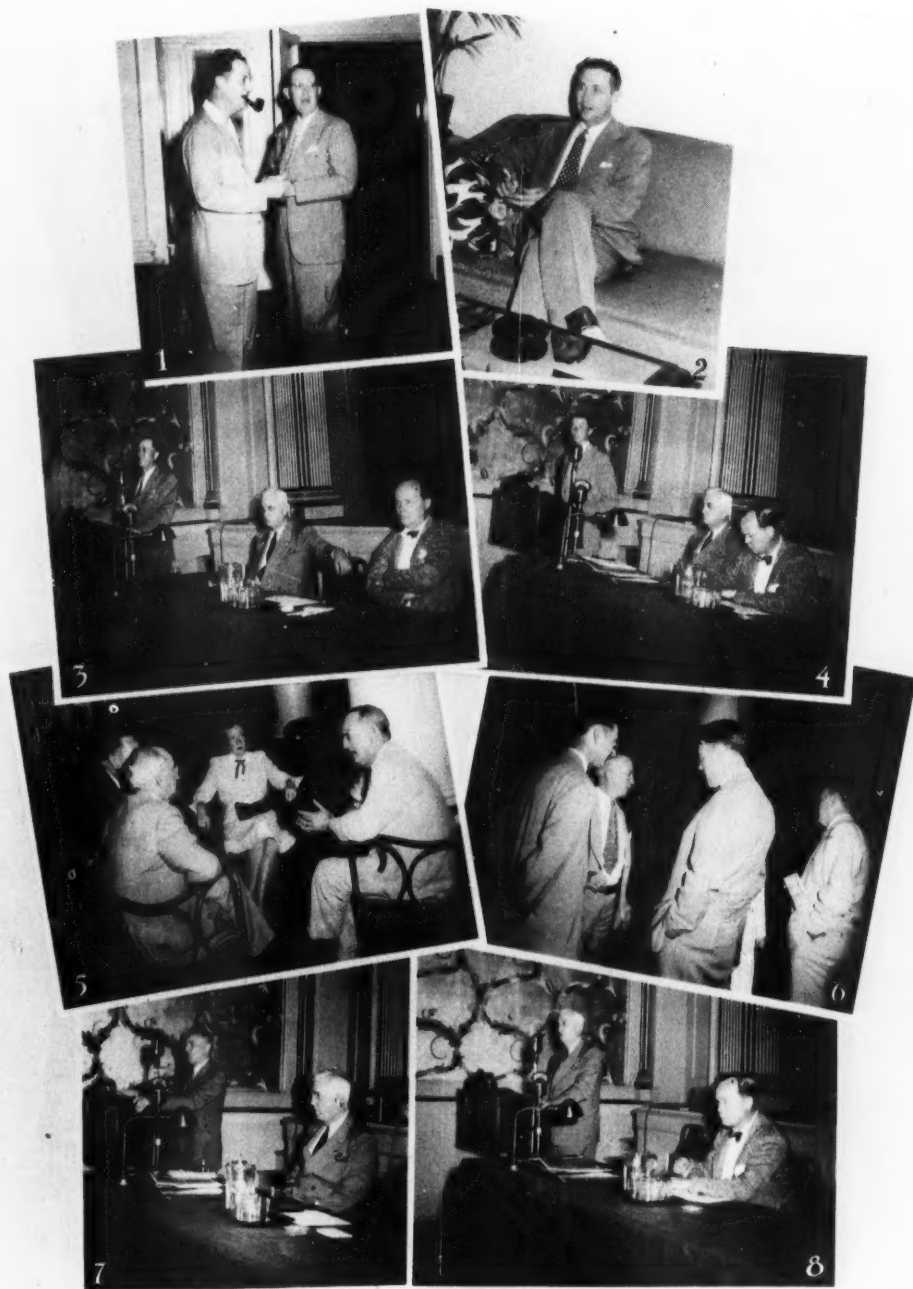
Charleston, S. C.



1. Mr. and Mrs. F. W. Heidinger. 2. L. G. Porter, Maynard Jenkins, Joe E. Culpepper. 3. Allen D. Brent, H. Howard McIver, Irving D. Dawes. 4. Mrs. J. E. Sanford, Mrs. Samuel L. Veitch, Mrs. A. Lynn Ivey. 5. Secretary of Agriculture Clinton P. Anderson. 6. W. C. Lassetter. 7. Louis H. Wilson.



1. Cedric G. Gran, Clifton A. Woodrum. 2. Clifton A. Woodrum. 3. Gus R. Douglass, Jr. 4. Paul D. Sanders. 5. Maurice Fitzgerald, the entertaining "Russian." 6. Carl Orth. 7. R. P. Koos, F. G. Keenen. 8. Oscar F. Smith, J. Albert Woods.



1. Wm. B. Copeland, Joe E. Culpepper. 2. John R. Taylor, Jr. 3. Ralph B. Douglass, Clifton A. Woodrum, Cedric G. Gran. 4. Wm. G. Carlin. 5. W. E. Barrett, Mr. and Mrs. L. Dudley George, E. S. Nash. 6. M. A. Keim, Dr. J. W. Turrentine, Harry B. Caldwell. 7. Prof. Emil Truog. 8. Clifton A. Woodrum, Cedric G. Gran.



1. J. S. Howard, Fred P. Bryan, R. F. Camp, T. L. Jefferies. 2. Wm. G. Carlin, Gus R. Douglass, Jr., Dr. W. T. Spanton, Carl Orth. 3. Chas. T. Harding, F. S. Moore, Dr. Frank W. Parker, M. E. Hunter. 4. Mr. and Mrs. Edward Ryland, Mrs. J. A. Howell, Mrs. M. E. Hunter, A. L. Walker, Jr., John Gruber. 5. Mrs. W. T. Steele, Jr., Mrs. George W. Gage, Mrs. George E. Pettitt, Mrs. J. M. Abbott. 6. Robert H. Reed. 7. Ray Yarnall.



PHOTOS BY
AMERICAN PLANT FOOD COUNCIL

1. Secretary of Agriculture Clinton P. Anderson. 2. Clifton A. Woodrum, William G. Carlin, Carl M. Orth, Gus R. Douglass, Jr., Dr. John R. Taylor, Jr., Robert H. Reed. 3. Oscar F. Smith, George C. Briggs, John E. Sanford, A. Lynn Ivey. 4. Clifton A. Woodrum. 5. Mac C. Taylor, E. M. Kitchen. 6. Dr. Firman E. Bear. 7. Harry B. Caldwell, W. T. Steele, Jr., W. G. Finn. 8. Mrs. M. E. Hunter, Mrs. Samuel L. Veitch, Mrs. George E. Pettitt, Mrs. J. E. Howell.

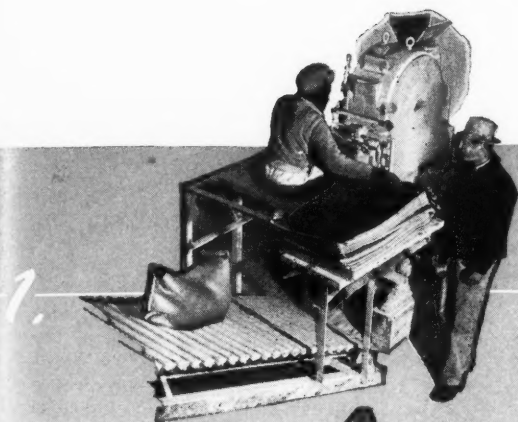


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AMERICAN PLANT FOOD COUNCIL

1. Dr. W. T. Spanton, Wm. G. Carlin, Carl M. Orth, Gus R. Douglass, Jr. 2. Cedric G. Gran, Mrs. Harry B. Caldwell, L. M. Walker, Jr. 3. Representative Harold D. Cooley. 4. Dr. Frank W. Parker, W. C. Lassetter. 5. Howard C. Fisher, W. C. Geagley. 6. Frank S. Washburn, John E. Sanford, Mrs. Clifton A. Woodrum, Secretary of Agriculture Clinton P. Anderson, Clifton A. Woodrum. 7. F. C. Burroughs, Jr., Albert B. Baker, Sr., Clifton A. Woodrum, and prizes offered in the golf tournament.

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A POLICY OF ABUNDANCE

(Continued from page 11)

At the moment, our own chances do not look too bright. Our entire farm program is endangered by the recent action of the House of Representatives. The Department of Agriculture Appropriation Bill that was passed by the House would cut the Agricultural Conservation Program by about one-half this year and kill it completely next year. It would knock out the farmer-committee system for democratic formulation and administration of conservation, price support and other programs. It would cut the work of the Soil Conservation Service. It would seriously interfere with the established government policy for extending credit to veterans and small farmers. It would stop a number of important research projects, including some on soils and fertilizers that are important to you as well as to farmers.

As disturbing as the actual mutilation of programs is the philosophy of the committee which recommended the action. It frankly does not like action programs. It wants to head backward to the days when farmers had no national programs for joint action and mutual protection.

If this represented the views of many

people, it would mean we could not follow any particular policy at all—to say nothing of a pioneering policy of organized, sustained, realistic abundance.

However, I am confident that the great majority of the United States people have a different and broader view.

The people have responded to the challenge of hunger in the world. I am sure they will respond to the challenge of plenty.

AMERICAN PLANT FOOD COUNCIL
CONVENTION

(Continued from page 9)

level farms" and "a smaller pattern is equally valuable to the small farmer.

Mr. Reed cited the importance of plant food in maintaining soil fertility, predicting that the publication (*Country Gentleman*) which he edits "will devote more attention to plant food in the next five years than it has in the past twenty."

"We are hearing of new techniques in soil testing, quicker and more accurate than we have known in the past," he said. "These will permit prescriptions for individual pieces of ground, not a shotgun prescription that both humans and soils have submitted to for so long."

He commented that having just returned from a tour of the mid-west, he "heard more talk of fertilizers than ever before" and "found more experimental work under way or starting than ever before."

At the convention session on Saturday morning, speakers for the Future Farmers of America and 4-H Clubs of the Nation stressed the importance of soil conservation, maintaining soil fertility and emphasized the value of fertilizer in a successful farming program.

The speakers were: Carl M. Orth, Route 6, Terre Haute, Ind., a winner in the National 4-H Clubs' Field Crops Contest; William G. Carlin, R. D. 4, Coatesville, Pa., "Star Farmer of America," highest honor annually by the 300,000 FFA members; and Gus R. Douglass, Jr., Grimms Landing, W. Va., National president of the Future Farmers of America.

"Lime and fertilizer are going to play an enormous part in the reconversion of the soil," Orth said, urging "cooperation in every way with the farmer" and keeping "production wheels going so that this task may be solved." He said that "principally by the use of lime and fertilizer and by experimentation" on his five-acre 4-H "test plots" he increase his corn yield from 59 bushels per acre in 1941 to 116.7 bushels per acre in 1946,

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increased his soybean yield from 15 bushels per acre in 1941 to 35 per acre in 1946.

Emphasizing the importance of maintaining soil fertility, the young 4-H Club leader said that "farmers must make plans for several years ahead to realize fully the benefits of soil conservation," adding that "a good tiller of the soil never refers to this task as one of the current year or even the next year" because "a good plan has to range from a five to ten-year period."

Carlin also testified as to the importance of plant food in maintaining soil fertility and emphasized that "a farmer must feed his cows to make them milk, feed his steers to produce beef, feed his broilers to produce meat, and feed his land to be able to produce all three."

He said that "during the past seven years, carloads of lime and fertilizer have been applied to all crops and pasture land, fields laid out for strip farming, acres and acres of sweet clover, rye grass, rye and red clover plowed under for green manure reinforced with 20 per cent superphosphate (100 pounds per load during 1946), plus field seed purchased from reliable warehouses, all have made a marked difference in the appearance and fertility of our farm," reporting that some crop yields "have increased as much as four fold" such as wheat from ten bushels per acre in 1940 to forty bushels per acre in 1945.

Douglass, who operates a farm on a 50-50 basis with his father, emphasized the importance of modern machinery in an economical farming system.

"My basketball coach in high school talked me out of playing basketball so that I could get training in agriculture and I thank him for it to this day," the young FFA president said.

"I am starting to use conservation methods on our farming land more extensively as my farm equipment is delivered," Douglass added, in relating the story of how he and his father took over a farm previously operated by tenants "who were taking all from the soil and returning nothing."

He said that "the adoption of approved practices to improve and conserve our soil fertility was never more important than it is today."

Prof. Emil Truog

The convention addresses were concluded by Prof. Emil Truog, chairman, Soils Department, University of Wisconsin at Madison, who attributed the "phenomenal" increase in fertilizer consumption in the midwest to "high farm prices" and "a realization by the farmers of the urgent need and advantage of such usage."

He reported that the annual fertilizer usage in the midwest during the 1940-1946 period rose "from less than one million to over two and one-half million tons."

Pointing out that fertilizer consumption for the Nation as a whole has closely paralleled the rise and fall in farm prices, he emphasized that in the midwest "it is doubtful that fertilizer usage will in the future be tied so closely to farm prices."

The Wisconsin soil scientist cited two reasons for the recent "phenomenal" increase in fertilizer usage in the midwest: (1) "high farm prices," and (2) "a realization by the farmers of the urgent need and advantage of such usage."

He said that "in Wisconsin the influence of an extensive statewide extension program involving hundreds of thousands of chemical soil tests and hundreds of field fertilizer demonstrations inaugurated several years earlier was beginning to have a marked effect in 1940," adding that "this indicates that when farmers once become adequately informed of the need and advantage of using fertilizer, they may greatly step up their demand . . . even though farm prices are not unusually high."

"That total (fertilizer) usage will be influenced greatly by farm income, there can be no question," Prof. Truog said. "That it will fluctuate less in the midwest than it has in the past in the Cotton States appears also to be a reasonable conclusion" for reasons, among others, that:

1. "Farmers quite generally have become soil-conservation minded, and in making soil conservation practices fully effective they will have to use more and more fertilizer."

2. "Since the main cost of producing crops is labor, and this item is the same whether the yield be high or low, it follows

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that high yields through adequate fertilization are the key to profitable crop production during periods of low prices" and "farmers are rapidly becoming aware of this fact."

3. "In the future, more than in the past, high quality and nutritive value of crops as favored by fertilization will be preferred and demanded by the consumer."

"Since farmers are rapidly learning that a dollar invested in fertilizer will usually produce several dollars worth of feed, and often much more, it seems reasonable to believe that in the future when fertilizer supplies will permit, Wisconsin farmers will divert a large share of their feed dollars to the purchase of fertilizer," he said. "By expending \$25,000,000 more annually for lime and fertilizer, the farmers of Wisconsin could probably reduce their present annual feed bill from \$75,000,000 to \$25,000,000 or even less, and thus effect a saving of at least \$25,000,000, and at the same time greatly promote soil conservation."

Resolutions and Elections of Officers

Following the addresses at the Saturday session the Convention held a short business session. The following resolution in support of the national and state agricultural research and educational programs was adopted:

Whereas, the fertilizer industry recognizes that an adequate agricultural research and educational program is essential in a well-balanced and coordinated farm program, and,

Whereas, adequate financial support of the research and educational agencies of the Federal and State Departments of Agriculture and the Land-Grant Colleges is essential in fostering a sound program of land management and conservation, and,

Whereas, the fertilizer industry has always strongly supported sound research and educational programs in the past and is contributing to scientific progress in its own research and educational programs;

Therefore, Be It Resolved that the Board of Directors of the American Plant Food Council in annual session at Hot Springs, Va., unanimously endorses the broad objectives of the research and educational programs now being conducted by the Federal and State Departments of Agriculture and the Land-Grant Colleges and hereby urges that adequate financial support be provided to assure a continuation of the programs so essential to the economic well-being of American agriculture.

A tribute to Ralph B. Douglass, retiring chairman of the Executive Committee, was read by T. E. Milliman and ordered entered

in the minutes. The text of this resolution is given in full elsewhere in this issue.

The election of Directors followed and the following were chosen for the term ending June 30, 1950:

J. Albert Woods, Wilson & Toomer Fertilizer Co., Jacksonville, Fla.

Ray C. Ellis, Ellis Chemical Co., New Albany, Ind.

William B. Tilghman, William B. Tilghman Co., Salisbury, Md.

Robert C. Simms, Naco Fertilizer Co., New York City

R. R. Hull, I. P. Thomas & Sons Co., Camden N. J.

S. Y. Priddy, Charles W. Priddy Co., Norfolk, Va.

Mac C. Taylor, Oregon-Washington Fertilizer Co., Seattle, Wash.

G. W. Covington, Gulfport Fertilizer Co., Gulfport, Miss.

Irvin Morgan, Farmville Oil and Fertilizer Company, Farmville, N. C., was elected to the unexpired term of Bayless W. Haynes, deceased.

C. B. Robertson, Robertson Chemical Corporation, Norfolk, Va., and George E. Pettit, Potash Company of America, New York City, were elected to the Executive Committee, succeeding Ralph B. Douglass and H. M. Albright, whose terms expire at this time.

Annual Banquet

The Second Annual Convention ended in a blaze of glory with the annual banquet on Saturday evening.

After introducing a number of the Council's guests, President Woodrum presented the speaker of the evening, Hon. Clinton P. Anderson, U. S. Secretary of Agriculture, "an agricultural statesman having the courage of his convictions and a practical understanding of the needs of American farmers." Secretary Anderson's address is given elsewhere in this issue.



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(Continued from page 14)

Concannon, C. C., U. S. Department of Commerce, Washington, D. C.
 Cooke, W. Dewey, Southern Fertilizer and Chemical Co., Savannah, Ga.
 Cooke, Sheppard R., F. S. Royster Guano Co., Norfolk, Va.
 Cooley, Hon. Harold D., Representative in Congress, Washington, D. C.
 Coope, G. F., Potash Co. of America, New York City
 Copeland, Wm. B., Smith-Douglass Co., Streator, Ill.
 Cory, H. V., American Cyanamid Co., New York City
 Crady, B. A., U. S. Potash Co., Meridian, Miss.
 Craig, Hugh, *Oil, Paint and Drug Reporter*, New York City
 Crammond R. G., Armour Fertilizer Works, Sandusky, Ohio
 Crenshaw, Mrs. Virginia T., *Commercial Fertilizer*, Atlanta, Ga.
 Crissey, J. C., Cooperative G. L. F. Soil Building Service, Ithaca, N. Y.
 Crockett, C. G., Standard Fertilizer Co., Inc., Williamston, N. C.
 Crockett, Mrs. C. G.
 Culpepper, James H., Smith-Douglass Co., Inc., Norfolk, Va.
 Culpepper, Joe E., Spencer Chem. Co., Kansas City, Mo.
 Cunningham, G. T., Armour Fert. Works, Atlanta, Ga.
 Curtis, A. T., Maybank Fertilizer Corp., Charleston, S. C.
 Curtis, Mrs. A. T.
 Curtis, Frank R., Chilean Nitrate Sales Corp., Shreveport, La.
 Cushman, George, L. I. Produce and Fertilizer Co., Riverhead, N. Y.
 Daley, C. F., West Coast Fertilizer Co., Tampa, Fla.
 Darden, M. W., Smith-Douglass Co., Norfolk, Va.
 Daughtridge, J. H., E. I. du Pont de Nemours & Co., Nitrogen Products Section, Wilmington, Del.
 Davis, Donald J., Organo Corp. of Florida, Orlando, Fla.
 Davis, Mrs. Donald J.
 Dawes, I. D., Virginia-Carolina Chem. Corp., Richmond, Va.
 Dawes, Mrs. I. D.
 Dickinson, Alfred J., Virginia-Carolina Chemical Corp., Richmond, Va.
 Dittmar, H. R., E. I. du Pont de Nemours & Co., Nitrogen Products Section, Wilmington, Del.
 Doetsch, James F., Chilean Nitrate Sales Corp., New York City
 Dorland, Wayne E., *Agricultural Chemicals*, New York City
 Douglass, Gus R., Jr., President, F. F. A., Grimms Landing, W. Va.
 Douglass, Ralph B., Smith-Douglass Co., Inc. Norfolk, Va.
 Douglass, Mrs. Ralph B.
 Douglass, V. C., St. Regis Paper Co., Chicago, Ill.
 Douglass, Mrs. V. C.
 Doyle, T. E., Baugh & Sons Co., Baltimore, Md.
 Duehrssen, Werner, Synthetic Nitrogen Products Corp., New York City
 Dungan, D. D., Zenith Chemical Co., Salisbury, N. C.
 Ellington, R. A., Armour Fertilizer Works, Montgomery, Ala.
 Ellis, Ray C., Ellis Chemical Co., Inc., New Albany, Ind.
 Ellis, W. W., Ellis Chemical Co., Inc., New Albany Ind.
 Ellis, Mrs. W. W.
 Finn, W. G., Dept. of Agriculture, Washington, D. C.

Fisher, Howard C., Michigan Fertilizer Co., Lansing, Mich.
 Fitzgerald, Maurice, Speakers' Bureau, New York City
 Fitzgerald, Mrs. Maurice
 Flowers, W. O., Federal Chemical Co., Anchorage, Ky.
 Floyd, E. Y., Plant Food Institute, Raleigh, N. C.
 Floyd, Mrs. E. Y.
 Floyd, Elizabeth
 Ford, Burton A., St. Regis Sales Corp., New York City
 Fountain, William, Dorchester Fertilizer Co., Cambridge, Md.
 Fountain, Mrs. William
 Freeman, J. V., U. S. Steel Corp.
 Freeman, Mrs. J. V.
 Gage, George W., Anderson Fertilizer, Co., Anderson, S. C.
 Gage, Mrs. George W.
 Gay, W. L., F. W. Berk & Co., Inc., New York City
 Geagley, W. C., Michigan Department of Agriculture, Lansing, Mich.
 George, L. Dudley, Richmond Guano Co., Richmond, Va.
 Gibbs, Jas. G., Etiwan Fertilizer Co., Charleston, S. C.
 Gibson, A. E., Armour Fert. Works, Wilmington, N. C.
 Gidney, D. R., U. S. Potash Co., New York City
 Gidney, Mrs. D. R.
 Gleason, G. H., Allied Chemical & Dye Corp., Barrett Division, New York City
 Gonzalez, Luis R., Ochoa Fertilizer Corp., New York
 Gorman, James, American Cyanamid Co., New York
 Grahn, Walter G., Peninsular Fertilizer Works, Tampa, Fla.
 Ground, J. W., Missouri Chemical Co., Joplin, Mo.
 Ground, Mrs. J. W.
 Gunn, Watts, Chilean Nitrate Sales Corp., New York City
 Haaes, H. C., Ochoa Fertilizer Corp., New York City
 Harding, Charles T., Virginia-Carolina Chemical Corp., Richmond, Va.
 Harley, W. W., Southern Fertilizer and Chemical Co., Savannah, Ga.
 Harrington, N. C., Baugh & Sons Co., Baltimore, Md.
 Harris, Lucien H., Arkell and Smith, Charlotte, N. C.
 Hart, W. T., Dept. of Commerce, Washington, D. C.
 Harvey, E. W., Allied Chemical & Dye Corp., Barrett Division New York City
 Harvey, Leo H., L. Harvey & Son Co., Kinston, N. C.
 Heidinger, F. W., Bennett & Clayton, Prospect Plains, N. J.
 Heidinger, Mrs. F. W.
 Heinrichs, Charles, Virginia-Carolina Chemical Corp., Richmond, Va.
 Henry, A. G., Armour Fert. Works, Birmingham, Ala.
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- Jaite, Russell, Jaite Co., Jaite, Ohio
- Jaite, Mrs. Russell
- Jeffries, T. L., Chilean Nitrate Sales Corp., Montgomery, Ala.
- Jenkins, Maynard, Spencer Chem. Co., Kansas City, Mo.
- Jensen, O. F., E. I. du Pont de Nemours & Co., Nitrogen Products Section, Wilmington, Del.
- Jett, Joseph C., Norfolk, Va.
- Jett, Mrs. Joseph C.
- Jett, Miss Esther
- Jones, R. S., Wilson & Toomer Fertilizer Co., Jacksonville, Fla.
- Jones, R. S., Jr.
- Joyce, J. J., Reliance Fert. & Lime Corp., Norfolk, Va.
- Kane, W. T., THE AMERICAN FERTILIZER, Phila., Pa.
- Karp, Lee O., Morris Karp & Son, Farmingdale, N. Y.
- Keel, Sidney T., International Minerals & Chem. Corp., Hinsdale, Ill.
- Keenen, F. G., E. I. du Pont de Nemours & Co., Nitrogen Products Section, Swarthmore, Pa.
- Keim, M. A., Potash Co. of America, Des Moines, Iowa
- Kelly, Douglas, Armour Fertilizer Works, New Orleans, La.
- Kemp, H. H., Armour Fert. Works, Greensboro, N. C.
- Kennedy, Bob, Speakers' Bureau, New York City
- Kennedy, Mrs. Bob
- Kieffer, Dale, Smith-Douglass Co., Norfolk, Va.
- Kingsbury, G. H., Kingsbury & Co., Indianapolis, Ind.
- Kirk, H. H., Armour Fertilizer Works, Atlanta, Ga.
- Kitchen, E. M., Pacific Coast Borax Co., New York City
- Koechlein, F. A., International Minerals & Chemical Corp., Chicago, Ill.
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- Kreus, L. A., Baugh & Sons Co., Baltimore, Md.
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- Lassetter, W. C., *Progressive Farmer*, Memphis, Tenn.
- Lavery, F. H., Naco Fertilizer Co., New York City
- Le Compte, B. B., Bone Dry Fertilizer Co., Richmond, Va.
- Le Compte, Mrs. B. B.
- Lehn, H. V., I. P. Thomas & Son Co., Woodbury, N. J.
- Lenhart, R. B., Cooperative G. L. F. Soil Building Service, Ithaca, N. Y.
- Lerch, Don, Director of Farm Program of C. B. S., Washington, D. C.
- Lewis, P. C., Bone Dry Fertilizer Co., Richmond, Va.
- Lewis, Mrs. P. C.
- Lightfoot, C. E., Potash Co. of America, New York City
- Logan, W. Hampton, Sr., Logan-Robinson Fertilizer Co., Charleston, S. C.
- Logan, W. Hampton, Jr., Logan-Robinson Fertilizer Co., Charleston, S. C.
- MacDowell, Charles H., Jacksonville, Fla.
- MacDowell, Mrs. Charles H.
- Mainor, F. B., Armour Fertilizer Works, Columbus, Ga.
- Marsden, R. S., Allied Chemical & Dye Corp., Barrett Division, New York City
- Martenet, S. J., E. Rauh & Sons Co., Indianapolis, Ind.
- Matthews, W. C., Chilean Nitrate Sales Corp., New York City
- McLane, W. F., Lyons Fertilizer Co., Tampa, Fla.
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- Mell, James R., Potash Co. of America, Atlanta, Ga.
- Merz, B. W., Union Special Machine Co., Chicago, Ill.
- Merz, Mrs. B. W.
- Milam, W. H., Chilean Nitrate Sales Corp., New York
- Miller, H. V., Armour Fertilizer Works, Houston, Texas
- Miller, R. P.
- Miller, H. H., Bemis Bros. Bag Co., Norfolk, Va.
- Mills, R. W., United Cooperatives (Brooklyne Chemical Works, Inc.), Philadelphia, Pa.
- Mitchell, L. J., Armour Fertilizer Works, Baltimore, Md.
- Mittleman, Charles, Kraft Bag Corp., New York City
- Monroe, James A., Smith-Douglass Co., Norfolk, Va.
- Moore, H. C., Armour Fertilizer Works, Atlanta, Ga.
- Moore, Frank S., F. S. Royster Guano Co., Norfolk, Va.
- Morgan, Irvin, Farmville Oil & Fertilizer Co., Farmville, N. C.
- Morgan, Mrs. Irvin
- Moyer, G. W., International Minerals & Chemical Corp., Chicago, Ill.
- Myers, A. N., Texas Gulf Sulphur Co., Inc., New York
- Nash, E. S., Southern Fert. & Chem. Co., Savannah, Ga.
- Nelson, J. E., Armour & Co., Chicago, Ill.
- Nichols, W. L., Nichols Fertilizer Corp., Norfolk, Va.
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- Oliveros, L. S., A. F. Pringle & Co., Charleston, S. C.
- Orth, Carl, 4-H Club Representative, Terre Haute, Ind.
- Osborne, George C., Virginia-Carolina Chemical Corp., Richmond, Va.
- Parker, Dr. Frank W., U. S. Department of Agriculture, Beltsville, Md.
- Peter, Kasper, American Cyanamid Co., Toledo, Ohio
- Pettitt, G. E., Potash Co. of America, New York City
- Pettitt, Mrs. G. E.
- Phillips, E. H., Cooperative G. L. F. Soil Building Service, Ithaca, N. Y.
- Porter, L. G., U. S. Department of Agriculture, Alexandria, Va.
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- Priddy, S. Y., Charles W. Priddy & Co., Norfolk, Va.
- Pringle, A. F., A. F. Pringle & Co., Charleston, S. C.
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 Rutland, J. W., International Minerals & Chem. Corp., Atlanta, Ga.
 Ryland, Ed., Virginia-Carolina Chemical Corp., Richmond, Va.
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 Salter, James S., Southern Fertilizer & Chemical Corp., Savannah, Ga.
 Sanders, Dr. Paul D., *Southern Planter*, Richmond, Va.
 Sanders, Mrs. Paul D.
 Sanders, J. O'H., Fulton Bag & Cotton Mills, Atlanta, Ga.
 Sanders, Mrs. J. O'H.
 Sanders, Omar, Fertilizer Inds., Inc., New York City
 Sanders, Mrs. Omar
 Sanford, J. E., Armour Fertilizer Works, Atlanta, Ga.
 Sanford, Mrs. J. E.
 Sanford, J. B., Bradley & Baker, Jacksonville, Fla.
 Sargent, J. R., Federal Chemical Co., Louisville, Ky.
 Schaffnit, W. E., Stedman's Foundry & Machine Works, Philadelphia, Pa.
 Scott, John, Missouri Chemical Co., Joplin, Mo.
 Scott, Mrs. John
 Shelburne, W. E., Armour Fertilizer Works, Nashville, Tenn.
 Simms, R. C., Naco Fertilizer Co., New York City
 Simms, Mrs. R. C.
 Sinwell, Paul W., Baugh & Sons Co., Baltimore, Md.
 Smith, Bachman, Naco Fertilizer Co., New York City
 Smith, Mrs. Bachman
 Smith, Edward H., William B. Tilghman Company, Salisbury, Md.
 Smith, F. E., Potash Co. of America, Baltimore, Md.
 Smith, H. V. B., H. J. Baker & Bro., New York City
 Smith, O. F., Smith-Douglass Co., Norfolk, Va.
 Smith, Mrs. O. F.
 Smith, Roger P., Arkell & Smith, Canajoharie, N. Y.
 Sneed, W. A., Potash Co. of America, Rockingham, N. C.
 Spanton, Dr. W. T., U. S. Office of Education, Washington, D. C.
 Sparks, Baxter, Bemis Bro. Bag Co., Norfolk, Va.
 Speer, Paul, U. S. Potash Co., New York City
 Steele, W. T., Cooperative Fertilizer Service, Inc., Richmond, Va.
 Stephenson, F. B., Robertson Chemical Corp., Norfolk, Va.
 Stewart, J. D., Jr., Federal Chemical Co., Inc., Louisville, Ky.
 Stewart, Mrs. J. D., Jr.
 Strobhar, A. D., Southern Fertilizer & Chemical Co., Savannah, Ga.
 Strudwick, F. N., Jr., William B. Tilghman Co., Salisbury, Md.
 Sutherland, B. F., Armour Fertilizer Works, Cincinnati, Ohio
 Taylor, H. L., Lion Oil Co., El Dorado, Ark.
 Taylor, Mac C., Oregon-Washington Fertilizer Co., Seattle, Wash.
 Techter, F. T., Allied Chemical & Dye Corp., Barrett Division, New York City
 Thomas, Weston, Potash Co. of America, New York City
 Thornton, Dr. Sam F., F. S. Royster Guano Co., Norfolk, Va.
 Thurston, W. R., Missouri Chemical Co., Joplin, Mo.
 Thurston, Mrs. W. R.
 Toombs, C. D., Armour Fertilizer Works, Norfolk, Va.
 Turner, Lee, International Paper Products Division, Baltimore, Md.
 Turrentine, Dr. J. W., Potash Institute, Washington, D. C.
 Vandercook, P., Armour Fertilizer Works, Chicago Heights, Ill.
 Verdery, A. B., Armour Fertilizer Works, Augusta, Ga.
 Vietch, S. L., THE AMERICAN FERTILIZER, Philadelphia, Pa.
 Vietch, Mrs. S. L.
 Walker, A. L., Jr., Texas Gulf Sulphur Co., New York
 Walker, L. M., Jr., Commerce of Agriculture, Richmond, Va.
 Waring, W. L., Lyons Fertilizer Co., Tampa, Fla.
 Waring, Mrs. W. L.
 Washburn, F. S., American Cyanamid Co., New York City
 Watkins, William F., U. S. Department of Agriculture, Washington, D. C.
 Wehner, W. E., Armour Fertilizer Works, Augusta, Ga.
 Wemple, H. R., Texas Gulf Sulphur Co., New York City
 Whitsel, T. S., Union Special Machine Co., Chicago, Ill.
 Whittington, J. S., F. W. Berk & Co., Inc., Tarrytown, N. Y.
 Wilkerson, T. L., American Cyanamid Co., New York
 Williams, R. T., E. G. James Co., Chicago, Ill.
 Woodrum, Mrs. C. A., Roanoke, Va.
 Woodrum, C. A., Jr., Roanoke, Va.
 Woodrum, Mrs. C. A., Jr., Roanoke, Va.
 Woodrum, Miss Martha Ann, Roanoke, Va.
 Woods, J. Albert, Wilson & Toomer Fertilizer Co., Jacksonville, Fla.
 Woods, J. Albert, Jr.
 Woods, Fred J., Gulf Fertilizer Co., Tampa, Fla.
 Woodward, B. B., Planters Cotton Oil & Fertilizer Co., Jacksonville, Fla.
 Wright, M. S., Texas Farm Products Co., Nacogdoches, Texas
 Wright, Thomas H., Jr., Acme Fertilizer Co., Wilmington, N. C.
 Wright, Thomas H., Sr., Acme Fertilizer Co., Wilmington, N. C.
 Wright, Tom, Texas Farm Products Co., Nacogdoches, Texas
 Wright, W. T., F. S. Royster Guano Co., Norfolk, Va.
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 Yarnell, Ray, *Cappers Farmer*, Topeka, Kans.
 Ziegler, P. J., Armour Fertilizer Works, Columbia, S. C.

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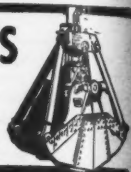
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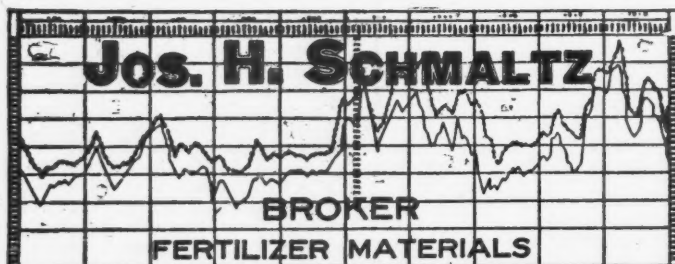
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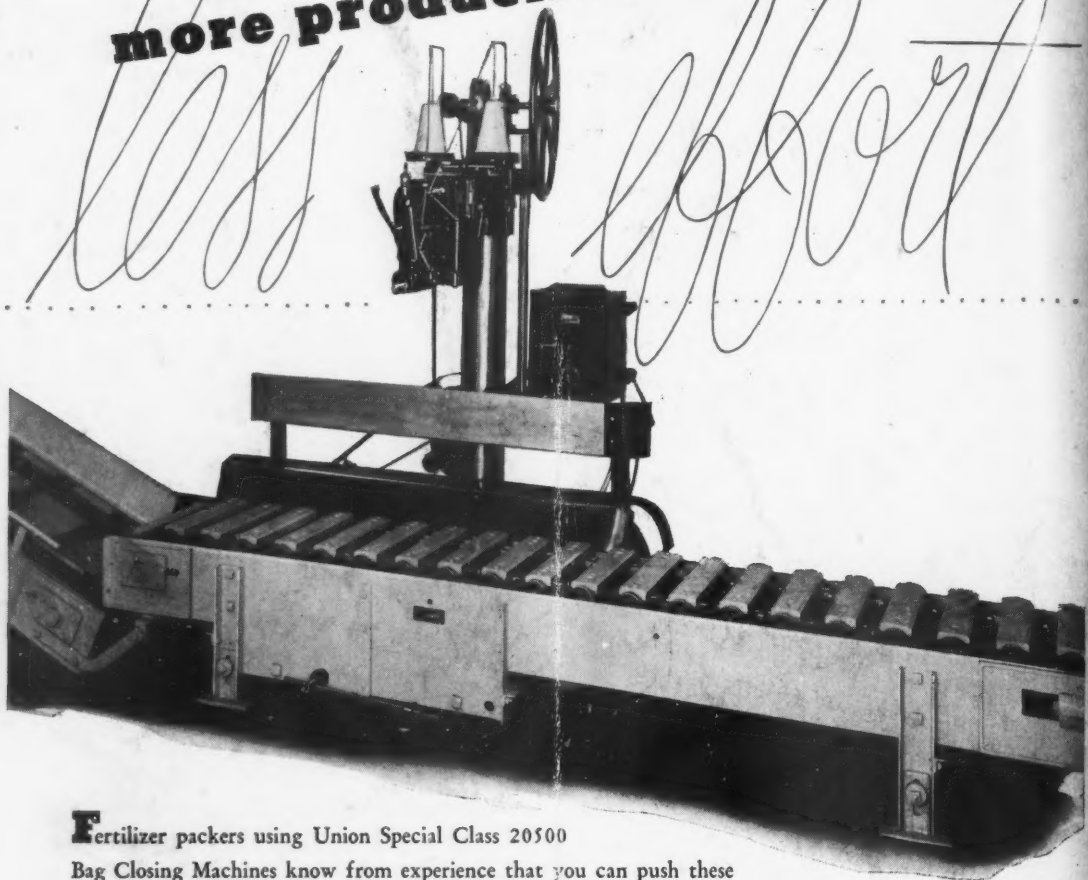
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